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U. S. Department of Agriculture

SANDYLOAM

Garden Lilies

Autumn -- 1948

ALAN AND ESTHER MACNEIL
SPOONERVILLE ROAD
NORTH SPRINGFIELD, VERMONT

TERMS

Due to varied growing conditions over which we have no control it is not possible for us to place any guarantee on bulbs other than that they are true to name and will arrive in good condition.

Remittance should accompany order in form of draft, check or money order.

All prices include prepaid postage or express to destination in the U. S. or Canada east of the Rocky Mountains. Customers living in the far West are requested to add 5% to the total cost to help meet shipping charges.

Prices are based on the assumption that orders received will amount to \$3.00 or more. While we are happy to fill smaller orders, they are expensive to handle, and on these a 25¢ service charge should be added.

Six bulbs of any one variety and size furnished at the dozen rate.

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This catalogue is being sent to our regular customers and old gardening friends as heretofore. Others wishing a copy should enclose 25c with their request. This cost may be deducted when bulbs are ordered.

A FOREWORD FROM

Sandyloam

"Plants are like children," a fine horticulturist said to us yesterday as we walked through our plantings. "If you're going to grow them well you have to love them."

Lilies are like children in their fresh beauty and charm, in their grace and color and joyous quality — in their infinite variety and in their promise. They are sensitive too. With good care they grow and flourish. Neglect on the other hand brings forth all kinds of problems.

It is easy to be good to them. They thrive in free and open spaces, they love sun and air and good food. A few like to be alone in a quiet spot beneath a tree, by a pond or brook. Others are at their best with many friends in the perennial or shubbery border. Some are bold and brilliant, real show-offs. Others are reserved and gentle, but so lovely.

This year our lilies are in particularly good form. They have never before had such tall and sturdy stems, so much bloom, such a variety and splash of color. Living with them this summer has been a big experience we have wanted to share with you.

Some of this is reflected in our catalog. The wonderful, blood-red Barbara of young Bill Horsford is offered for the first time, as are the fine yellow Helen Carroll of Dr. Skinner, the Aurelian seedlings of Carleton Yerex, and the pink L. centifolium seedlings of Le Vein Freimann. Liliums Fire King, auratum praecox and Henryi citrinum are back again. These are milestones. But there are scores of choice lilies in our list this year, ranging from the delicate lovely Martagon-Hansonii hybrids, through the stately white trumpets, the vivid hybrids of recent years, through Mrs. Henry's handsome introductions, to the great exotic forms that come late in the summer.

Our new book, Garden Lilies, published by Oxford University Press, has received unanimously enthusiastic reviews throughout the country. We shall be happy to accept orders. It is priced at \$3.50.

G A R D E N L I L I E S

AMABILE (Korea) This is a brilliantly colored dwarf variety, which bears from 4 to 6 grenadine-red black-spotted flowers of Turk's cap shape. Splendid for a splash of color in the rock garden or early border. Late June¹. Height 1½ to 2 feet. Plant 6 inches deep.
Each 45c Dozen \$4.50

AMABILE LUTEUM The true yellow form is rare and one of the loveliest of all lilies. Plant 4 to 6 inches deep.
 Stock limited. Each \$2.25 Dozen \$24.00

AURATUM (Japan) This is an exotic beauty with immensely fragrant open-trumpet shaped flowers frequently as large as a dinner plate. They are white with a gold band down the center of each petal and the entire flower is flecked with crimson. Mid August to September is the blossoming time and they grow from 4 to 6 feet or taller. Plant 8 to 12 inches deep.
 Collected wild bulbs. Each 85c, \$1.00 Dozen \$9.25, \$10.50

AURATUM, LATE FLOWERING FORM This form, which starts to open when *L. Auratum* is going by and continues well into October at Sandyloam, is a decided addition to the autumn garden. Though there is not the same degree of color variation as in *L. auratum*, the blooms are large, and the plants are normally much taller than in the type.
Each \$1.00, \$1.35 Dozen \$10.50, \$14.50

AURATUM PLATYPHYLLUM This showy form flowers a week to ten days earlier than the type. The plants are generally not quite so tall, much more stocky and with broader leaves. The blooms are larger, more massive, slightly pendant or tilted, and somewhat hooded — in contrast to the wide-open flowers characteristic of the type.
Each \$1.10 Dozen \$12.00

AURATUM PRAECOX The early flowering form starts to open when *L. regale* is at its peak. It is a handsome lily, more graceful than the type but with somewhat less massive blooms.
Each \$1.25 Dozen \$13.50

AURELIAN HYBRIDS An important new group of seedlings developed by Carleton Yerex. The large blooms vary from vase-shaped to those with reflexed petals and in color from creamy white through the yellows to apricot. Mid to late July flowering. 4 to 6 feet.
Each \$3.50 Dozen \$35.00

¹ Flowering dates given for all lilies are for central New England. The periods will naturally vary in other climates.

BACKHOUSE HYBRIDS A group raised by the late Mrs. R. O. Backhouse and a priceless addition to the garden. The individual blooms though not large are charming and are Martagon shaped, growing on a long spike. They are difficult to classify as to color for, actually, they are variable and iridescent, ranging from pale ivory through the golds, pink, mauve, apricot orange — all variously flushed and marked. An excellent group for the garden as they are not particular as to soil or location, establish well and are quite immune to mosaic. Height 5 to 6 feet. Plant about 6 inches. Late June to early July flowering. Un-named seedlings. **Each \$2.50 Dozen \$25.00**

BROCADE One of the finest of the named hybrids. The flowers are orange-yellow with pink marbling and maroon spots. A free-flowering lily and a vigorous grower. **Each \$3.00**

MRS. R. O. BACKHOUSE This is one of the most attractive and probably the most vigorous of the entire group. There are a great many beautifully colored Martagon-shaped blooms to a stalk. The interior of the petals is ivory overlaid with a transparent flush of gold and delicately flecked with reddish-purple. The reverse of the petals is a deeper yellow shaded with greenish-orange though the reverse does not show when the blooms are expanded. Plant 6 to 8 inches. **Each \$3.50**

BRENDA WATTS See Preston hybrids.

BARBARA First time offered. A recent hybrid developed by W. C. Horsford and given the Award of Merit of the Massachusetts Horticultural Society in 1946. The large recurved blooms are a deep blood red and face outward from the stem. Late June. 2 feet. Plant 6 inches deep. **Each \$5.00**

BROWNII (China) The true variety of Brownii is rarely beautiful and has been appropriately described as "the best tailored of all flowers." It bears from 2 to 4 large, trumpet-shaped and delicately fragrant blossoms a pure waxy white on the inside with chocolate brown stamens and pistil. The outside of each petal is marked by a band of purplish brown. This species is best grown where it will get shade part of the day. Its normal height is about 3 feet and it blossoms in late June. Plant 8 to 10 inches deep. Stock very limited. **Each \$2.25 Dozen \$24.00**

CANADENSE Our native meadow lily and a lovely thing it is, with graceful drooping bell-shaped flowers in golden yellow or orange-red. It grows from 3 to 7 feet and does best in a moist situation in partial shade. Late June. Plant from 6 to 8 inches deep. **Each 35c Dozen \$3.50 Hundred \$28.00**

CANDIDUM (Europe) The beautiful Madonna Lily is well known. It is pure white with a short trumpet and a delicious fragrance. It blooms at the same time as Delphinium Belladonna and the combination of the two is traditional. Height 4 to 5 feet. Plant early, 3 inches deep in full sun. American grown bulbs. **Each 65c, 85c, \$1.10 Dozen \$7.00, \$9.00, \$12.00 Hundred \$56.00, \$72.00, \$96.00**

CENTIFOLIUM HYBRIDS A group of glorious trumpet lilies of mixed parentage, with blood of the rare and striking *L. centifolium* dominant. The fragrant trumpets are immensely large, white, with a flash of yellow in the throat, and the reverse is stained from rose through bronze to green. Mid July flowering. Height 4 to 6 feet. Plant 8 to 10 inches. Splendid, mosaic-free bulbs. Each 65c, 85c Dozen \$7.00, \$9.00

CONCOLOR (Korea) The small scarlet blooms are upright and delicately star-shaped. It is a distinctive lily with a great deal of sparkling charm and not nearly so well known as it should be. Mid June flowering. Height 18 inches. Plant 4 to 5 inches deep. Each 35c Dozen \$3.50

CORONATION See Preston hybrids.

DALHANSONII The color of this Martagon-Hansonii hybrid is a glossy purple brown that takes on a deep mahogany red with sun shining through it. Plant 8 inches deep in full sun or partial shade. Each \$4.50

DAURICUM HYBRIDS A new group of seedlings with erect cup-shaped blooms in colors that range from tawny gold through apricot to a few that are stained with rose and spotted with brown. June flowering. 12 to 18 inches. Plant 5 to 6 inches deep. Each 75c Dozen \$8.00

DAURICUM var. WILSONI This lily is very similar to the above group of hybrids as to color and stature — but flowers six weeks later, in early August. Each 75c Dozen \$7.50

DAVIDI var. WILLMOTTIAE (China) The blooms are reflexed and deep orange-red. As many as twenty grow in a pyramidal raceme on the graceful 5-foot stem. Mid July. Plant 8 to 10 inches deep. Will probably require staking. Each 75c Dozen \$7.50

DUCHARTREI A rare Tibetan species with marble-white reflexed blooms delicately flecked with violet and marked with green in the throat. This is not an easy lily and seems to prefer a rather light acid soil with a high humus content, preferably on the dry side. It has a wandering underground stem and may come up as much as two feet from where the bulb is planted. 2 to 4 feet tall. Early July flowering. Plant 4 to 5 inches deep. The bulbs are characteristically small. Each \$2.50

DUNKIRK A vigorous new hybrid by F. L. Skinner and an outstanding plant, which grows to 4 feet tall and bears a number of outward-facing deep blood-red flowers. The color is distinctive. The blooms are slightly flattened and the tips of the petals somewhat recurved. July flowering. Plant 4 to 5 inches. Awarded a First Class Certificate by the Massachusetts Horticultural Society in 1947. Each \$7.50

EDNA KEAN See Preston hybrids.



L. auratum



L. Canadense

E. F. PALMER'S HYBRID INTRODUCTIONS See L. GALAHAD, L. SULTAN, AND L. VIKING. Mr. Palmer is generally considered the greatest plantsman in North America.

FIESTA HYBRIDS A highly publicized group of hybrids with reflexed blooms well spaced on thin wiry stems. The colors range from yellow through orange to clear dark red. The plants grow from 4 to 6 feet tall and prefer full sun. July flowering. Plant 5 to 6 inches deep. **Each \$3.00 Dozen \$30.00**

FIRE KING Those who have seen this lily consider it one of the most important garden plants to have been introduced in many years. It grows to about 4 feet and develops a magnificent spike that bears up to forty vermillion-scarlet blooms carried at right angles to the stem. The flowers "look at you" and this quality is a distinct break developed from crossing and re-crossing pendant or Turk's cap species with upright forms. L. Fire King is easy to grow, tends to multiply and is probably the most brilliantly colored lily in cultivation. A well-grown clump is a mass of sheer flame in the garden for from three to four weeks in early summer. Plant 5 to 7 inches. **Each \$3.50**

FORMOSANUM (Formosa) This is a splendid, very late trumpet lily. It somewhat resembles L. regale but blooms in late September or even October. The trumpets are longer and somewhat more constricted than L. regale. Height 4 to 6 feet. **Each 50c Dozen \$5.50**

FORMOSANUM, INTERMEDIATE FORM These are crosses of L. formosanum, Pricei with L. formosanum, and the resultant hybrid selfed or crossed back with Price's form. They bloom just after L. regale and average 30 inches in height. Plant 5 to 6 inches. **Each 60c Dozen \$6.50**

FREIMANN'S PINK FORMS This is a new race of trumpet lilies, and one of the most important to be offered in many years. The color is deep Ephyrite red on the exterior, with a flush of the same color in a somewhat paler shade over the ivory of the interior. Seen in massed plantings the color is almost identical with that of joe-pye weed. The seedlings are variable. In some blooms the color extends right down into the throat — in others the throat may be lemon yellow. These lilies are very vigorous.

PINK CENTIFOLIUM Late July and early August flowering. The plants commonly are taller than 6 feet. **Each \$3.50**

PINK REGALE Mid July. Vigorous but not so tall as the above, generally 4 to 5 feet. **Each \$3.50**

GALAHAD A trumpet lily developed by the outstanding Canadian plantsman, E. F. Palmer, from several generations of re-crossing of selected hybrids of L. regale, L. sulphureum, and L. Sargentiae. The breeding objective was for a lily of L. princeps season or later, and sulphur or light yellow color throughout. This has been achieved in GALAHAD. It is a strong robust grower, hardy, carrying up to 14 blooms on a pyramidal raceme. **Each \$10.00**

GOLDEN CHALICE HYBRIDS A group of cup-shaped lilies ranging in color from clear lemon-yellow through the rich warm shades of gold and apricot to orange. Best planted in a warm and sunny situation. June flowering. 2½ to 4 feet. Plant at least 6 inches deep. **Each \$1.50 Dozen \$16.50**

GREEN MOUNTAIN HYBRIDS These lilies, developed by the late Dr. L. Horsford Abel, are probably the finest group of trumpet lilies in existence. The buds range from greenish sulphur through bronze, green and pink. The interiors are pure white or cream with yellow, pale orange, or greenish throats. The plants are in flower from three to four weeks in mid-summer and range in height from 3½ to 6 feet. Plant 8 to 10 inches deep. **Each \$1.10, \$1.60 Dozen \$12.00, \$17.50**

GUINEA GOLD A Martagon-Hansonii hybrid that inherits the splendid constitution of both parents. Pink buds make a fine contrast with the open flowers which are yellow, thickly spotted with brown. Holds its color best in light shade. June flowering. Height 5 feet. Plant 6 to 7 inches deep. **Each \$3.50 Dozen \$35.00**

HANSONII (Korea) This is considered one of the best garden lilies because of its charm and ease of culture. Its Martagon-shaped blossoms are a rich cadmium yellow, spotted purplish-brown. It comes early — late June — and grows from 4 to 6 feet tall. It will hold its lovely color best if planted 8 to 10 inches deep in partial shade. **Each \$1.25 Dozen \$13.50**

HELEN CARROLL First time offered. A new dwarf hybrid developed by F. L. Skinner. The cup-shaped blooms measure approximately 8 inches across and are a clear unspotted Chinese yellow. July flowering. 8 to 12 inches tall. **Each \$5.00**

HENRYI (China) This is another vigorous and dependable lily. It comes into blossom just before the speciosums in mid to late August and carries as many as twenty flowers on 5 to 8 foot stems. The flowers though not as large as the speciosums are the same frilly recurved shape and are a soft orange-yellow with brown spots. The foliage is excellent but the plant is apt to require staking. Plant 9 to 10 inches deep. **Each 50c, 75c Dozen \$5.50, \$8.00**

HENRYI CITRINUM The rare pale lemon-yellow form of the above. **Each \$7.50**

HURRICANE See Preston hybrids.

IRIDOLLAE See Mrs. Henry's Rare Native Lilies.

JAPONICUM (Japan) This is the most beautiful of the pink trumpet lilies. The blooms are the size of *L. regale*, but much more delicate in texture and earlier by two to three weeks. The color is variable, generally a soft apple-blossom pink but sometimes deeper and sometimes very pale or even pure white.. The stem is slender and grows to 2 feet, bearing up to five blooms. It is not an easy, reliable lily. We have grown it very well, both in dry sandy soil and in moist woodland locations, but in both sites the soil was highly acid. Plant 4 to 5 inches deep.

Each \$1.20 Dozen \$13.00

LILLIAN CUMMINGS See Preston hybrids.

LONGIFLORUM, "The Estate Lily" This is probably the finest strain of *L. longiflorum* ever introduced. It far outstrips all other varieties in size, substance of flower, stature and ease of culture. Under glass the Estate Lily sends up strong 5 foot stems which carry from three to eight immense white trumpets fully 50% larger than the best imported varieties of *L. longiflorum*. The flowers last longer than those of any other variety of this lily. For those with greenhouses there is nothing finer to grow for early spring flowering. For outdoor culture it is an excellent trumpet lily for early August and hardy in New England. Plant 8 inches deep.

Early November delivery. Each \$1.35 Dozen \$14.50

MARHAN A fine and vigorous hybrid between *L. Martagon album* and *L. Hansonii*. The lustrous orange of the petals overlaid with purple gives the effect of burnished copper. June. Height 4 to 5 feet. Plant 6 to 7 inches.

Stock limited. Each \$4.00

MARTAGON ALBUM (Europe) One of the loveliest lilies in cultivation, it has delicate small Turk's cap flowers, pure white and sweetly fragrant. It grows to about 4 feet tall and blooms toward the middle of June. Try it with peonies or with ferns. Plant 4 to 5 inches. Does well in heavy soil.

Each \$1.00 Dozen \$11.00

MARTAGON-HANSONII HYBRIDS These include the Backhouse hybrids, *L. Dalhansonii*, *L. Guinea Gold*, and the Marhans.

MAXWILL A vigorous relatively disease-proof variety that establishes easily and grows prolifically. The 5 to 6 foot stem is luxuriantly leaved. The greatly recurved flowers hang from a pyramidal raceme and are, in color, a brilliant orange-red with black spots and long brick-red stamens. Late July. Plant 8 inches deep.

Each 75c Dozen \$8.00

MICHIGANENSE This lily is native to the middle west and botanists have not decided whether it is a distinct species or whether it is a natural hybrid of *L. canadense* and *L. superbum*. The color range is as variable as that of *L. canadense*, but the petals are more reflexed. Like *L. canadense* and *L. superbum* it is an excellent lily for the woodland garden since it likes partial shade and a fairish amount of moisture. Height 2 to 5 feet. July. Plant 6 inches deep.

Each 50c Dozen \$5.50

MRS. HENRY'S RARE NATIVE LILIES It is our privilege to present to American gardeners the native lilies discovered by Mrs. J. Norman Henry. The list will grow longer from year to year as additional varieties are ready for distribution.

A collection of eight of Mrs. Henry's new color series of *L. philadelphicum* was shown at the 1946 Lily Show of the Massachusetts Horticultural Society. They were given a Silver Medal as well as the Society's Award of Merit.

CANADENSE GOLDEN RULE A most chaste and beautiful lily. The pure golden yellow flowers are completely spotless and have golden yellow pollen. No lily is more exquisitely lovely than this one. **Each \$25.00**

CATESBAEI LONGII The rare northern form of *L. Catesbaei*. It is a dwarf lily. The beautiful flowers have long clawed petals that are "Coral Red" (Ridgway), shading to yellowish green at base with a few small dark spots. Collected several years ago by Mrs. Henry. This lily demands an acid soil composed solely of peat and sand.

Flowering size pot grown plants available. **Each \$10.00**

Four — 3 year bulbs from seed. **Each \$7.00**

IRIDOLLAE Mrs. Henry's already famous "Pot of Gold Lily." A most remarkable and very beautiful new species of *Lilium*, discovered, collected, and grown by Mrs. Henry. The sweetly fragrant yellow flowers, often slightly stippled with pinkish red, are conspicuously spotted with dark brown in the throat. The pollen varies from bright mahogany red to yellowish brown. It is a Turk's cap Lily with well recurved segments. This lovely Lily reaches a height of over 6 feet in its native home in the south and carries as many as 8 or more blooms. In northerly climates with their shorter growing seasons, it may not grow so tall. At Gladwyne it blooms at about 3 to 4 feet in height. The slender stems carry oblanceolate leaves, typically in whorls and roughened on the margins and beneath the prominent veins. The upper leaves are small and so far apart as to give the upper portion of the stems a leafless appearance. The requirements of this exquisite Lily are a position in a sheltered spot and an acid sandy soil. Grown in this manner at Gladwyne it has survived five subzero winters out of doors with no mulch or protection of any kind. A full technical description of *Lilium iridollae* by Mrs. Henry appeared in *Bartonia* No. 24, published by the Phila. Bot. Club, Acad. Nat. Sci. Philadelphia, Pa. **Each \$75.00**

PHILADELPHICUM BLACK DIAMOND A wonderful and weirdly beautiful lily. The blood red flowers are heavily blotched with black from base to tip of petals. Strong bulbs that may flower in 1947. **Each \$20.00**

SUPERBUM, var. COPPERHEAD An odd and attractively colored lily that is difficult to describe. The petals and sepals are a pastel tawny orange with a bronze glow. The midribs on the outside are dark and the deep maroon spots on the inside are comparatively large and conspicuous. The flower is free from any red shading. **Each \$15.00**



L. candidum

Photograph by T. H. Schuelke



L. centifolium hybrids

SUPERBUM, var. HOWARD HENRY The very handsome blood-red flowers, "Nopal Red" R. are of an exceptionally rich shade and highly glossy. The throat is soft orange ornamented with tiny dark dots. The texture of the petals is thick and waxlike. It is a lily of great beauty and distinction, and conspicuous from afar. **Each \$20.00**

SUPERBUM, MRS. HENRY'S NEW VARIETY A splendid lily found in a Florida swamp six years ago. The coloring is much the same as **L. superbum**, but the longer, wide-spreading stamens give grace and distinction to the flowers. The leaves are much longer and narrower than the type and the stem is exceptionally rigid. It is a vigorous grower and reached a height of over 10 feet in its native home. It comes into bloom three or four weeks later than **L. superbum**. It was illustrated in 1942, "American Horticultural Society Lily Year Book" on page 91. It has withstood subzero winters without any protection. This new variety of **L. superbum** will be validly described in due time. **Each \$25.00**

SUPERBUM, var. NORMAN HENRY This is a rare yellow form that was only recently discovered. It is a characteristic **L. superbum** with blooms of a clear, unshaded and unspotted butter yellow. The flowers are of splendid texture with a surface like fine panne velvet. It is in best form when gardens are apt to be rather bare, late July and early August. And it is, without question, one of the most valuable garden plants in the world today and, more than that, one of the loveliest. **Each \$25.00**

PARDALINUM GIGANTEUM The Sunset Lily An easily grown and brilliantly colored lily from California. The sharply recurved flowers are rich vermillion, stained deep blood red at the tips, golden orange in the throat, and heavily spotted with deep purple. Mid July. 3 to 5 feet tall. Plant 7 to 9 inches in full sun or light shade **Each 50c Dozen \$5.50**

PHILADELPHICUM (Eastern North America) One of our few upright flowering native lilies and one of the most brilliantly colored. The flowers are vivid orange scarlet with large dark maroon spots. A woodland lily which does best in acid soil, in partial shade where the drainage is especially good. Grows 1½ feet. Plant 5 inches deep. June to July flowering. **Each 25c Dozen \$2.75**

PRESTON HYBRIDS A group of splendid hybrids by Miss Isabella Preston, the Canadian hybridizer, who has worked with lilies for years and to whom we are indebted for many fine garden plants.

CORONATION One of Miss Preston's most outstanding achievements. The plant grows to 3 feet tall, is upright and well leaved and bears up to twenty or more somewhat pendant recurved blooms of a clear primuline yellow lightly spotted brown. The exterior of the petals is also a clear pale yellow. Like all of Miss Preston's hybrids this is a tested garden subject, of simple culture and vigorous habit. The color is completely delightful. Plant 6 to 8 inches. **Each \$2.75 Dozen \$29.00**

HURRICANE An open pollinated seedling of L. Edna Kean. The inflorescence is arranged like a candelabrum with upward-facing, vase-shaped flowers. The color is deep blood-red. Because of its distinctive and charming shape and ease of culture this is one of Miss Preston's most valuable contributions to the garden. Early July. Height 3 feet.

Each \$3.75

SPITFIRE A companion plant to the above and identical in every respect except the color which is flame scarlet with some medium sized bay spots.

Each \$3.75

STENOGRAPHER SERIES:

BRENDA WATTS This is one of the very best garden lilies. It grows magnificently, establishes readily, and has a strong constitution. It is one of those happy garden subjects that knows its job and proceeds to do it thoroughly. Added to this is the bold and brilliant beauty of the plant itself — tall and graceful, bearing a long spike of outward-facing blooms, soft orange-red in color. For dignity of stature and a mass of sheer color in the July garden it is hard to surpass. Height 5 feet. Plant 6 to 8 inches.

Each \$1.50 Dozen \$16.50

EDNA KEAN Resembles L. Brenda Watts except for its color which is a deep cherry-red, a color almost unique among lilies. It does not have quite the magnificent constitution of Brenda Watts, but will hold its own in nine gardens out of ten.

Each \$1.50 Dozen \$16.50

LILLIAN CUMMINGS Another fine grenadine-red hybrid. An extremely vigorous lily and an asset to any collection.

Each \$1.50 Dozen \$16.50

PRINCEPS PINK A splendid group of trumpet lilies in which both the interior and reverse of the petals is variously stained with shades of pink. They were developed by Carleton Yerex and unlike the pink forms of L. regale and L. centifolium by Mr. Freimann, these have been selected in terms of an apple-blossom tone, rather than the deeper dramatic coloring of the Freimann seedlings.

Each \$3.00

REGALE (China) This beautiful and well-known white, trumpet-shaped lily should be in every garden. It will thrive for years, increasing in size and beauty with each passing season. July. Height 4 to 7 feet. Plant 7 to 11 inches deep.

Each 45c, 75c, \$1.00

Dozen \$4.50, \$8.25, \$11.00

Hundred \$36.00, \$66.00, \$88.00

RUBELLUM (Japan) A dwarf apple-blossom pink trumpet lily and one of the earliest to flower. The individual blooms are small, trumpet-shaped, and the color is invariably a clear delicate pink. The plant grows to 10 or 12 inches and flowers in late May or early June. It seems to prefer a slightly heavy soil with a high humus content, but is generally quite adaptable. Plant 4 to 5 inches deep.

Each \$1.25 Dozen \$13.50

Each 75c Dozen \$8.00

SATAN See **L. UMBELLATUM SATAN**

SCOTTIAE A valuable hybrid from Canada which was produced in 1929 and received the RHS Award of Merit in 1932. The blooms face outwards and are of a bright salmon-orange shade spotted purple. A most floriferous lily of easy culture. Height 2 to 3 feet. Plant 5 to 6 inches. June to July flowering.

SENECA A new hybrid by the distinguished American authority, Mr. George L. Slate, is a distinct and pleasing lily obtained by crossing *L. tigrinum* with *L. Leichtlinii* var. *Maximowiczii*. The flowers face outward, have reflexed perianth segments and are of a softer and more pleasing color than *L. tigrinum*. Mature plants bear 25 or more flowers, considerably more than *L. tigrinum* and bloom during the last three weeks in August. or two to three weeks later than that species. The plants grow to 5 or 6 feet and have very woolly stems and buds. *L. Seneca* grows well in a lime free sandy loam as well as a heavy clay loam containing much lime. The bulbs are small and should be planted 5 to 6 inches deep.

Each \$2.00 Dozen \$20.00

SHUKSAN (Bellingham hybrid) One of the finest hybrids of American origin. On the tall wiry stems are tiers of gleaming jewel-like flowers of warm yellow, richly spotted reddish brown. In color and in pattern the surface might be compared to a leopard's skin. Vigorous and hardy and of easy culture. Mid July. Plant 6 to 8 inches deep.

Each \$1.00 Dozen \$11.00

SPECIOSUM (Japan) This is one of the most popular of all lilies. It comes late in the season, generally starts opening its frilly recurved flowers toward the end of August and carries well into September. Normally it grows to 4 feet. This season we offer the following varieties:

SPECIOSUM ALBUM A beautiful pure white form with a green-starred throat and coppery-brown anthers. September flowering.

Each \$1.50 Dozen \$16.50

SPECIOSUM MAGNIFICUM This form is characterized by its brilliant and lovely color. The deep crimson of the spotting flushes the entire surface of the petals, leaving only a slender border of white. Each \$1.50 Dozen \$16.50

SPECIOSUM PUNCTATUM An early form of *L. speciosum* that is distinguished from the type by its flowering period, by the graceful and vigorous character of the stem, the paler rose-pink color, and by the leaves which form two ranks on opposite sides of the stem. It is particularly valuable for northern gardens as it flowers from three to four weeks earlier than *Rubrum*. With us it is in bloom in late July and early August. In the more southerly gardens it will be in several weeks earlier.

Collected wild bulbs. Each \$1.50 Dozen \$16.50

SPECIOSUM RUBRUM This is the most widely grown and best known variety of *L. speciosum*. The flowers are white flushed and spotted with pink, ranging in shade from rose-pink to deepest carmine-pink. A hardy and strong growing plant. Each 85c, \$1.00 Dozen \$9.25, \$10.50

SPECIOSUM RUBRUM, DUTCH FORM This form, grown in and imported from Holland for hundreds of years, is not so vigorous nor is it so colorful as the bulbs listed above — but it is still a good garden plant. Late August and September. Two feet. Flowering bulbs.

Each 50c Dozen \$5.00

SPITFIRE See Preston hybrids.

SUPERBUM The native American Turk's cap is a great favorite with gardeners and is one of the finest of all lilies. The pendant blooms are large and sharply recurved, orange-red in color, tipped with deeper red, and heavily spotted with brown. It adjusts well to almost any location, full sun as well as partial shade, and is recommended for the border, for inter-planting in shrubbery and especially for naturalizing. It can stand more moisture than most lilies. The height of the plant varies from 4 to 8 or 9 feet depending on where it is planted. July flowering. Plant 8 to 10 inches deep. Each 35c Dozen \$3.50

SULTAN A new E. F. Palmer hybrid showing plant and flower characters of the three species involved in its parentage [*(L. croceum* x *L. elegans* Mahogany) x *L. tigrinum*]. From full-sized bulbs the stems rise to a height of five feet with 16 blooms well arranged in a graceful raceme. The tall, straight, strong stems bear an abundance of healthy glossy leaves. A bulbil former, but somewhat less freely than the *L. tigrinum* parent. The blooms are 4½ inches in diameter, half reflexed, and face outwards. Color is a medium dark red with a touch of *L. tigrinum* rose, and spotted darker. First blooms come as the **STENOGRAPHER** lilies — Edna Kean, Muriel Conde, etc. — have reached or passed their peak. 4 to 5 open at once with continuous bloom for 3 weeks. Each \$5.00



L. concolor



L. Martagon Album

SZOVITSIANUM (Caucasus) Related to *L. monadelphum* this lily is distinct from it in several respects from the gardener's point of view. The bell-shaped blooms are less reflexed, and a lighter color, being pale straw-yellow, freely spotted purplish-black. It is earlier to bloom, flowering for us in late May or early June, one of the first lilies in our garden. It grows from 3 to 5 feet, but seems to resent disturbance. It likes plenty of humus, but not too acid a soil, and is happy in half shade. Small bulbs which have flowered, but may take a year to establish.

Each \$2.00 Dozen \$22.00

T. A. HAVEMEYER SEEDLINGS The seedlings of T. A. Havemeyer are among the loveliest of August flowering plants. They range in color from ivory white through the pale golds to a deep warm yellow. The shape is somewhat variable. Some are of the open trumpet type while others are lovely nodding Turk's caps. Most are as good as Havemeyer and some are better. Whatever their shape or color each one is a gem. Limited number available as stocks are being reserved for propagation.

Each \$3.50

TENUIFOLIUM The charming Coral Lily is justly popular. It is an engaging little witch, one of the first to bloom, rarely more than 18 inches tall, with small Turk's cap flowers of brilliant scarlet. It is not a true perennial, tending to be triennial, and it is just as well to start a few new bulbs each year to keep your planting intact. Plant 4 to 5 inches.

Each 30c Dozen \$3.25

TESTACEUM The beautiful Nankeen Lily is one of the choicest and most effective plants for the garden. Similar in growth to *L. candidum* but it bears heads of fragrant broad, recurved flowers of nankeen yellow, delicately flushed with palest pink. Unlike *L. candidum* the flowers form an open cluster at the very top of the stem and are pendulous. It is not particular as to soil, a good loam is most satisfactory and a little lime is beneficial. Bulbs should be planted shallow (4 inches) and early. Best grown in full sun, it also does well in partial shade but is more liable to injury from botrytis in the latter situation. As the color is so delicate it requires careful placing. As companions, pale blue delphinium, or a background of shrubbery are suggested. There have never been enough bulbs of this old hybrid to meet the demand.

Each \$2.25 Dozen \$24.00

THE DUCHESS A striking new hybrid by Dr. F. L. Skinner developed from a cross of *L. amabile* on a yellow seedling of *L. dauricum*. The blooms open flat and face outward with a downward tilt. The color is a brilliant cadmium-orange, with a sheen to the petals that gives them a special brilliance. The plant grows to 3 feet, is vigorous, showy and prolific. We highly recommend it. Mid to late June. Plant 3 to 5 inches deep.

Each \$5.00

TIGRINUM, Mosaic-free. The Tiger Lily is so well-known that it needs no description here. It is a magnificent August flowering lily and indispensable for the herbaceous border. We are pleased to offer the old New England type as it was brought here centuries ago by our sea captains. This is an especially vigorous form with dark rich green foliage and stems that seem to delight in their ability to grow and reach toward the sun. We consider it quite the finest form of *L. tigrinum* in commerce. Height 6 feet. Plant 5 to 8 inches.

Each 50c, 60c Dozen \$5.50, \$6.50

TSINGTAUENSE Somewhat resembles *L. concolor*, but is much more striking and vigorous. The broad rich green foliage grows in whorls around the stem as does the foliage of *L. Hansonii*. The individual blooms are a glossy nasturtium-red, upright, star-shaped with long fluted petals. This is one of the good new garden lilies, distinctive and adaptable. July. 3 feet. Plant 6 to 7 inches. Each \$1.50 Dozen \$16.50

UMBELLATUM (European garden hybrids) The so-called Flame, Candlestick or Torch Lily of our gardens. All bear umbels of upright, cup-shaped flowers in brilliant colors and nothing can compare with them when planted in groups in the border. They are of easiest culture, require no care and establish well, quickly forming good sized clumps. We list a group of distinct color and habit. Late June. Plant 5 to 6 inches deep.

GRANDIFLORUM The common form, a brilliant orange-red spotted with deeper red. Height 2½ feet.

Each 50c Dozen \$5.00

MAHOGANY A showy form with a good head of mahogany-red blooms. 18 inches tall. Each \$1.00 Dozen \$10.50

SATAN A new clone developed by the outstanding American specialist, Mr. George L. Slate, and offered last season for the first time. The plant grows to 2½ feet, and bears up to four or five well-spaced blooms, a deep currant-red in color. One of our men, on seeing it for the first time said, "You couldn't find anything redder than that, nor greener than that, no matter how hard you looked." The individual blooms measure six inches across, with petals in their natural position — not forced to gain extra spread. We expect this lily to replace all other deep red forms of *L. umbellatum* as soon as stocks are more generous. It is a good grower and increases rapidly in the garden. Each \$3.50

SELECTED SEEDLINGS This is a group of mixed seedlings also developed by Mr. George L. Slate. It is from these that he made his final selections for the series of new lilies that we are beginning to introduce. The first named clone is **SATAN**. Several others will be offered during the next few years. The **SELECTED SEEDLINGS** are not a chance group, but were carefully bred and those that are offered here are all so-called second bests. Almost any of them would be good enough to introduce as a new clone, but some of them are not sufficiently distinct from other lilies now in existence to warrant separate naming. Others of very fine quality are being discarded in favor of one of the slightly better named clones. The color range is pale yellow to orange, through flame, to deep blood red. A very few of them have outright-facing, wide-open, or reflexed blooms. Any of them is a first-rate addition to the garden. It is not possible for us to select from this group in terms of color or shape, but you may be certain that each plant will be both striking and distinctive.

Each \$1.25 Dozen \$13.50

VIOLET NILES WALKER Mr. Louis Vasseur considers this his finest seedling. It is a clear unspotted lily of vivid persimmon orange, with slightly deeper shadings towards the center of the petals. The plant grows to 18 inches and bears from five to six wide-open blooms that measure six inches across. It holds its glowing color well in full sun or light shade and flowers at about the same time as W. N. CRAIG. Each \$7.50

W. N. CRAIG This fine hybrid by Mr. Louis Vasseur is a striking and graceful plant carrying up to six blooms of a clear unspotted orange-yellow. The petals are slender and so well spaced that most forms of *L. umbellatum* seem coarse by comparison. It is a vigorous plant that grows 2 to 2½ feet and is among the first of the *umbellatum* to flower. It is named in honor of the late Wm. N. Craig and was awarded the First Class Certificate of the Massachusetts Horticultural Society in 1943.

Each \$2.50 Dozen \$26.00

VIKING *L. Willmottiae* x *L. tigrinum*. A nodding, Turk's cap lily, developed by E. F. Palmer, intermediate between the parent species in season, bloom size, and color. Forms bulbils like *L. tigrinum* but somewhat less freely. It is more vigorous and taller than either parent growing easily to a height of six feet with strong, graceful stems and with 36 or more blooms on a long raceme. The lower bloom pedicels carry secondary buds so that there is open bloom over the whole spike for a considerable period. There is continuous bloom for three weeks, from about July 12 (at Vineland, Ontario) to early August.

Each \$5.00

WILLMOTTIAE See *L. Davidi* var. *Willmottiae*.

FLOWERING CHART FOR LILIES

MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER
<p>RUBELLUM ★ P</p> <p>MONADELPHUM -Y</p> <p>TENUIFOLIUM ★ R</p> <p>PYRENAICUM -Y</p> <p>TENUIFOLIUM GOLDEN GLEAM★O</p> <p>MARTAGON ALBUM ★ W</p> <p>UMBELLATUM W.N. CRAIG ★★ OY</p> <p>DAURICUM ★★ O</p> <p>SCOTTIAE ★★ O</p> <p>CONCOLOR ★★ R</p> <p>HANSONII ★★ Y</p> <p>DALHANSONII ★ B</p> <p>MRS. R.O. BACKHOUSE ★★ I</p> <p>CERNUUM ★ L</p> <p>JAPONICUM -P</p> <p>WASHINGTONIANUM -L</p> <p>PARRYI -Y</p> <p>BROCADE ★ I</p> <p>SCEPTRE ★★ L</p> <p>CANADENSE ★★ O ★ Y</p> <p>UMBELLATUM GRANDIFLORUM★O</p> <p>ELEGANS LEONARD JOERS ★★ OY</p> <p>BROWNII ★ W</p> <p>FIRE KING ★★ R</p> <p>GUINEA GOLD ★★ B</p> <p>MARHAN ELLEN WILLMOTT★B</p> <p>AMABILE ★★ O</p> <p>AMABILE LUTEUM ★★ Y</p> <p>CANDIDUM ★ W</p> <p>SCOTTIAE HYBRIDS ★★ O-Y AND R</p> <p>BRENDA WATTS ★★ R</p> <p>EDNA KEAN ★ R</p> <p>TSINGTAUENSE ★ O</p> <p>UMBELLATUM MAHOGANY ★★ B</p> <p>TENUIFOLIUM RED STAR ★ R</p> <p>ELEGANS ASTROS. MAHOGANY ★★ R</p> <p>WILLMOTTIAE ★ O</p> <p>TESTACEUM - A</p> <p>DAVIDII ★★ O</p> <p>REGALE ★★ W</p> <p>ELEGANS DOUBLE SCARLET ★★ R</p> <p>DUCHARTREI -W</p> <p>GRAYI ★ R</p> <p>GREEN MT HYBRIDS ★★ W</p> <p>PRINCEPS ★★ W</p> <p>CROW'S HYBRID ★★ W</p> <p>PARDALINUM GIGANTEUM ★★ R</p> <p>SUPERBUM ★ O</p> <p>UMBELLATUM MOONLIGHT ★★ Y</p> <p>CENTIFOLIUM ★ W</p> <p>MICHIGANENSE ★ O</p> <p>PHILADELPHICUM - R</p> <p>SPITFIRE ★ O</p> <p>CORONATION ★ Y</p> <p>SHUKSAN ★ Y</p> <p>AURELIANENSE SEEDLINGS ★★ I</p> <p>MAXWILL ★★ O</p> <p>DAURICUM WILSONII ★★ A</p> <p>AURATUM ★ W</p> <p>CALLOSUM ★★ O</p> <p>SARGENTIAE - W</p> <p>TIGRINUM ★★ O</p> <p>DAURICUM PARDINUM ★★ A</p> <p>SPECIOSUM PUNCTATUM ★★ P</p> <p>FORMOSANUM EARLY ★ W</p> <p>HENRYI ★★ OY</p> <p>T.A. HAVEMEYER ★★ I</p> <p>SULPHUREUM -W</p> <p>SPECIOSUM RUBRUM ★★ P</p> <p>LONGIFLORUM, ESTATE LILY -W</p> <p>WARDII -P</p> <p>FORMOSANUM INTERMEDIATE ★ W</p> <p>SENECA ★ O</p> <p>BROWNII KIUKIANG ★ W</p> <p>SPECIOSUM ALBUM ★ W</p> <p>FORMOSANUM LATE ★ W</p>					
<p>COLORS OF LILIES ARE SHOWN BY SYMBOLS GIVEN BELOW.</p> <p>THESE LETTERS ARE PLACED AT RIGHT OF NAME</p> <p>A-APRICOT OY-ORANGE-YELLOW</p> <p>B-BROWN P-PINK</p> <p>I-IVORY TO PALE YELLOW R-RED</p> <p>L-LILAC W-WHITE</p> <p>O-ORANGE-RED Y-YELLOW</p> <p>BEST GROWERS ARE DOUBLED STARRED ★★</p> <p>GOOD GROWERS IN MOST GARDENS-THOUGH THEY MAY NEED REPLACEMENT FROM TIME TO TIME-ARE SINGLED STARRED ★</p> <p>THIS CLASSIFICATION INTO BEST GROWERS AND GOOD GROWERS IS MEANT TO BE SUGGESTIVE ONLY ONE OR TWO OF THE NEW LILIES ARE NOT WELL ENOUGH KNOWN TO BE ACCURATELY CLASSIFIED ALSO, GARDEN AND CLIMATIC CONDITIONS VARY SO THAT LILIES HAPPY IN ONE GARDEN MAY FAIL TO ESTABLISH IN THE NEXT; AND LILIES DIFFICULT IN ONE GARDEN MAY GROW LIKE WEEDS IN ANOTHER.</p> <p>THE FLOWERING PERIODS GIVEN ARE FOR CENTRAL VERMONT. THEY WILL HAVE TO BE ADJUSTED FOR GARDENS IN OTHER PARTS OF THE COUNTRY</p>					
MAY	JUNE	JULY	AUGUST	SEPTEMBER	OCTOBER

LILIES FROM SEED

As we have had many requests for seed we have arranged to offer a limited number of varieties. Seeds should be planted about $\frac{1}{2}$ inch deep and may be sown in the open, but can be controlled more readily if planted either in a cold frame, or in flats in the house. The species starred (*) should germinate in from a month to six weeks — the others are slow and though they germinate underground will not show their first growth above ground until the second summer. A light mulch of sphagnum or peat moss is helpful in maintaining an even soil moisture.

Seeds of the following are priced at 25c per packet and the number of seeds in each packet varies according to the rarity of the species. While hybrid lilies do not come true from seed, it should be noted that the possibilities in such a packet are most fascinating for the gardener.

*amabile	*longiflorum
*amabile luteum	*Maxwill
auratum	michiganense
auratum platyphyllum	Parryi
Backhouse hybrids	*regale
Brownii colchesteri	*regale hybrids
canadense	*Sargentiae
*centifolium	Shuksan
columbianum	speciosum rubrum
*concolor	superbum
*Crow's hybrids	Szovitsianum
*dauricum var. Wilsoni	*tenuifolium
*Davidi	*tenuifolium Golden Gleam
*Davidi var. Willmottiae	tsingtauense
*formosanum	*umbellatum grandiflorum
*formosanum, Pricei	Washingtonianum
*Green Mt. hybrids	
*Henryi	

In addition to the above we offer seed of:

- *L. centifolium hybrids from one of our fine West Coast hybridizers. This is hand pollinated and is carefully selected to give a wide range of color and form. Small packet 50c

CULTURAL NOTES

When lilies are healthy and find a place in the garden that they like, they thrive.

Most lilies like partial shade at some point during the day. A very few of them actually prefer full sun and an even smaller number like heavy shade. These are noted in the text. Almost all like a ground cover of some sort that will shade the ground in which they are growing but will leave the stems free to rise up into the sun.

Good locations are various. The perennial border offers excellent growing conditions for most species. Lilies are happy when interplanted with peonies, iris and other plants. Almost all of them are effective and do exceptionally well when planted in isolated groups against the shrubbery. The taller ones are happy and effective within light shrubbery. A rather large group lend themselves to naturalization and the woodland garden. All are happy with ferns.

A good friable loam with plenty of humus is the best soil. Do not be afraid to feed. Bonemeal, well rotted manure or compost can be worked into the beds. A mulch of manure and commercial fertilizer is excellent if applied in fall so that the food will work down into the ground during the winter. Manure can also be applied as a summer mulch if desired and is best if used either at or after the time of flowering. Manure should not be used on those varieties of lilies labeled capricious or those highly subject to basal rot.

The majority of species are best if fall planted, so we strongly urge purchasing at that time. Bulbs are lifted and shipped as soon as they are ready. Some mature early in August, others not till mid-November. If the bulbs are going to arrive late in the season and there is danger that the ground might be frozen at the time, it is recommended that it be mulched with leaves, straw or boughs to keep it open. After the bulbs are planted the mulch should be replaced so the ground temperature will reach freezing gradually.

Planting depth for lilies should be three times the vertical diameter of the bulb. This distance is measured from the bottom of the bulb. There are five exceptions to the general rule: the two European lilies, *L. candidum* and *L. testaceum*, which have no stem roots, are planted a few inches below the surface; and the three Indian lilies, *L. cathayanum*, *L. giganteum* and *L. cordatum* are planted with the tip of the bulb at the surface. In the rare situations where the ground water level is very close to the surface more shallow planting is indicated. However, it is also true that lilies have a tendency to find their own depth and that the depth varies from location to location; consequently, the depth at which the bulbs are placed is somewhat flexible. We have seen an entire bed of *L. pardalinum* work itself up from ten to twelve inches to three or four inches from the surface, because the bed where they were growing was periodically flooded and the shallower planting met their requirements. Likewise, in another bed of *L. auratum*, where the bulbs were set only six or seven inches below the surface, we found on digging that they had pulled themselves down to from eighteen to twenty-four inches.

Good drainage is essential. Do not attempt to plant lilies where they must stand in water for any length of time as this will be conducive to rot.

There are certain problems connected with the growing of all garden plants and lilies naturally have their share. The following discussion deals with these and with the means by which they can be controlled.

SPRING FROSTS

Occasionally late spring frosts raise havoc, especially when they follow an early warm good growing period. Those lilies that tend to start into growth very early as do *L. regale*, *L. Hansonii*, and the *Martagon-Hansonii* hybrids are naturally most liable to injury. On this account we recommend a good winter mulch over these lilies in areas liable to late frosts. The mulch tends to keep the bulbs dormant in spring so that when they emerge and the buds show, danger of frost injury is pretty well past. If manure, peat moss, leaves, straw or pine needles are used this material may be left on through the summer, thus working into the soil and adding humus content. If boughs or similar material is used it should be left on as late as possible. Lilies planted through perennials or light shrubbery are fairly well protected by the foliage of these surrounding plants.

BOTRYTIS

Botrytis is troublesome in some localities. This is the fungus that forms brown spots on the leaves during damp weather, particularly in spring and early summer. Attempts to control it are primarily for the sake of appearance. Unless the condition is serious the bulbs are not affected though they may not achieve their full growth for the following year. In districts where it is prevalent, those districts having extended damp weather in spring, preventive measures are recommended. A spray or dust of Bordeaux¹ applied early will help to ward off an attack. This should be repeated whenever the weather is damp. Lilies especially susceptible to Botrytis should be planted, if possible, where the foliage has an opportunity to dry off. Morning sun and a gentle breeze are helpful. This group includes *L. candidum*, *L. testaceum*, *L. chalcedonicum*, *L. canadense*, and *L. Hansonii*. *L. candidum* is probably the worst offender. With this lily the spores of the fungus are carried through the winter on the basal leaves that form in autumn. By spring these leaves have served their function and can be removed and burned if there is a tendency to Botrytis in the garden.

MOSAIC

Mosaic has been the most widely discussed of the troubles affecting lilies. We treat it at some length here because so much of the popularly published information on the subject has been both impractical and misleading.

Mosaic is a virus that affects a few lilies seriously, some slightly and many not at all. There is no known cure. Perhaps some day the research pathologists will find one. Frankly, we do not feel it is nearly so serious as it has been generally painted, since it is quite easy to detect, comparatively easy to "live with" and can be well controlled by proper selection and spacing of varieties in the garden. The gardener who has a bit of space so that his lilies are interplanted with other perennials and mayhap some shrubbery will have little or nothing to worry about.

¹ See Penetrol on page 27.



The Martagon-Hansonii hybrids in a woodland setting



L. japonicum

For the gardener's convenience we are classifying the more important varieties according to their susceptibility to mosaic:

Group 1

The first group consists of a number of fine standard garden lilies which always have mosaic. One or two have had it for hundreds of years. In spite of this they are all splendid plants that delight their owners year after year.

L. candidum	L. chalcedonicum (with rare exceptions)
L. elegans	L. princeps, George C. Creelman
L. testaceum	L. T. A. Havemeyer
L. umbellatum (old forms)	L. tigrinum (with rare exceptions)

Group II

The second group, at the other extreme as to susceptibility, consists of those lilies that resist infection to the point where they can be safely considered immune.

L. Brownii (type)	L. Martagon (all forms)
L. giganteum	L. pardalinum (all forms)
L. Hansonii	The Martagon-Hansonii hybrids

Group III

The third group is liable to infection but does not acquire it readily and tends to survive for a number of years in the garden, though the plants will gradually deteriorate somewhat and may finally die out.¹

L. regale	L. Maxwill ¹
L. tenuifolium	L. sulphureum ¹
L. Willmottiae ¹	L. monadelphum ¹
L. Henryi ¹	L. Szovitsianum ¹
L. cernuum	All of the Preston, Stooke's and Bellingham hybrids ¹

Group IV

The fourth group consists of those lilies that are most highly susceptible to infection and rarely survive more than a single season when infected.¹

L. auratum	L. japonicum
L. canadense ¹	L. superbum ¹
L. formosanum	

These classifications while an invaluable guide to the gardener are somewhat artificial. Actually the two hundred odd varieties and species of lilies run the whole gamut from susceptibility to immunity and within each classification there is considerable range in regard to immunity. This is particularly true of Group IV in which L. auratum, L. formosanum, and L. japonicum are the most highly susceptible that we know, while L. canadense and L. superbum can stand a fairish amount of exposure. Now and then we find individual clones that show a real degree of desistance.

Mosaic is spread from one plant to another ONLY by means of a small group of sucking and chewing insects. It does not travel through the air or soil. Aphis are the principal culprits. The farther north one

¹ Those designated are less susceptible than the others within the given group. Also, individual plants within Groups III and IV may prove relatively resistant.

goes the fewer aphids one finds. At Sandyloam we have none. We believe that our only mosaic carrier is the potato leaf hopper. The insect carriers are almost invariably wind blown or crawling and consequently do not tend to travel very far, not more than 30 to 50 feet in the garden.

With this knowledge as a basis the gardener can order and plant his lilies with more understanding and with relative safety and confidence. Lilies from Groups I and II are completely reliable. They will never perish from mosaic, and they can be planted any place without fear as to their susceptibility.

The lilies in Group III can be ordered with a good deal of confidence. They are all of them first rate garden lilies and even if infected with mosaic will be excellent garden plants for many, many years. However, if a particular gardener wishes any one of this group of lilies in very special form, with a maximum of height and floriferousness he should buy clean bulbs, which we offer, and plant them at some distance from the lilies in Group I.

Group IV is a quite different story. This small group has in it the lilies we must guard. If they were not so exquisite they would not warrant the special attention they require. But *L. auratum* and *L. japonicum* are so beautiful that most gardeners feel that the extra effort necessary to grow them well is justified. If these lilies are to last in the garden more than a year or two they must be kept at a safe distance from all lilies except those in Group II. A distance of 30 to 50 feet from infected plants is recommended. (This is as far as the carriers are apt to travel in the garden.) The group does especially well when planted alone against shrubbery.

It is our opinion that the average gardener will find it very much simpler to plan his plantings in terms of getting along with mosaic than it will be for him to try to eliminate it altogether. Our own losses from mosaic are always negligible because we follow the cultural program we recommend for the gardener. But we do have some losses now and then and the gardener in turn should expect to have to make some replacements from time to time. We use every precaution to see that the bulbs that we send out are clean. We isolate by planting in the woodland and we spray regularly with nicotine sulphate to control the carriers. When you order lilies from us from Groups II, III, and IV you may expect clean bulbs, though we have not felt justified in issuing a blanket guarantee that they are mosaic-free. That would require laboratory testing of every individual bulb before shipment. Most of the lilies in Group I that have had mosaic throughout their history, the Madonnas probably from Biblical times, are infected in our plantings. But while every dooryard Tiger and umbellatum has mosaic and thrives indefinitely, we are slowly building up some clean stocks of these particular lilies for the handful of mosaic-free gardens which exist in this country.

BASAL ROT

Though basal rot has been recognized for many, many years it is still little understood even by the specialist. Fortunately it attacks only a limited number of lilies, and we are now learning that prevention and control are possible through disinfection and careful attention to good cultural practices. It is a kind of rot that starts either on the roots of the lily or at the basal plate and works up through the bulbs causing the scales to drop off and fall away. It is possible that it may

be present in the soil in which the bulbs are planted. It is possible that it may be present on bulbs when they arrive from the nursery and it is also possible that some slight bruise or injury that occurs during packing or mailing or handling in the garden may be responsible. As a precaution against basal rot's developing we disinfect all bulbs before shipment, but this does not preclude their acquiring the disease, though it is a very real safeguard.

We feel that the current habit of shipping bulbs with the roots intact is not helpful and may sometimes be harmful, as these roots rarely survive and take hold again in their new home but only tend to rot once they are in the soil. In some varieties that are not susceptible to basal rot the presence or absence of roots is relatively unimportant. However, in our experience those lilies liable to basal rot are much less apt to acquire infection if the roots are clipped before the bulb is replanted. If they are removed, Hormodin or any of the standard rooting powders will help the bulb to quickly form new and healthy roots. Dusting with Spergon is an added precaution.

In the matter of basal rot there is a subtle factor worthy of mention. The purple form of *L. Martagon* which is native to Europe thrives in European gardens and is apparently not subject to basal rot. In this country the purple *Martagon* is a different story. There is no lily more susceptible to basal rot, even when it has been grown from seed here. The white *Martagon*, which is native to the same areas in Europe, thrives in both European and American gardens. These illustrations could be repeated many times with other well known varieties. All we can say is that in a certain environment a given lily tends to thrive -- or the reverse. No one has as yet been able to put his finger on just what occurs. This will, of course, be an area for some future research.

In addition to *L. Martagon* type, the following lilies are especially susceptible to basal rot in American gardens: *L. chalcedonicum*, *L. testaceum*, *L. croceum*, *L. pardalinum*, *L. Humboldtii*, some of the Bellingham hybrids, *L. pyrenaicum*, *L. formosanum*, and *L. speciosum*.

It may be of interest to note that basal rot is probably the principal factor responsible for the serious losses that frequently occur in seedling lilies.

NATIVE PLANTS

For the convenience of our customers we are offering a limited group of wild plants. We have been asked frequently for these plants which are native to Vermont and this is a simple means of making them available. All plants are gathered for us by an old friend and colleague in Charlotte, Vermont, who happens to be one of the country's finest collectors. Shipments will be made directly from Charlotte.

Orders cannot be accepted for less than 25 plants of one kind. All consignments will go forward Express Collect.

FERNS

Ferns are the ideal companion plants for lilies. They are happy together and handsome as well.

For Open Border

ASPLENIUM FILIX-FOEMINA-LADY FERN A delicate fern, one to three feet in height, preferring moist soil. Very hardy. Clumps growing increasingly larger. **\$20.00 per 100**

DICKSONIA PUNCTILOBULA-HAY-SCENTED FERN A medium sized, delicate, light green fern, easy to grow. Forming endless carpets in open pastures of Vermont. One of the best for open border. **\$20.00 per 100**

ONOCLEA STRUTHIOPTERIS-OSTRICH FERN A very hardy, handsome fern. Dark green, symmetrical, growing up to five feet. A separate seed stalk, plume shaped remains during the winter. Excellent for foundation planting, woodland, and lowlands. **\$25.00 per 100**

OSMUNDA CLAYTONIA-INTERRUPTED OR FLOWERING FERN A large, tall-growing fern whose fronds are interrupted with seed spores early in the summer. Fronds up to 8 inches wide and four feet tall. **\$25.00 per 100**

For Moist Shady Places

ADIANTUM PEDATUM-MAIDENHAIR FERN One of the better known ferns quite at home in most situations. Prefers partial shade. Fronds are delicate on a pedicule 6 to 18 inches high. Grows in clumps. Excellent for woodland. **\$22.00 per 100**

ASPIDIUM CRISTATUM-CRESTED WOOD FERN A small narrow fronded fern. Nearly evergreen, prefers moist soil, sun or shade. **\$25.00 per 100**

ASPIDIUM MARGINALE-EVERGREEN WOOD FERN Medium height, strong structure. One of the hardiest of ferns, growing as easily on ledges as in lowland. A good companion for A. spinulosum. **\$20.00 per 100**

ASPIDIUM SPINULOSUM-TOOTHED WOOD FERN Another evergreen of delicate lace-like fronds. Grows to medium height. Used extensively by florists with flowers. Prefers moist places. Excellent for woodland. **\$20.00 per 100**



L. regale



L. superbum var. Norman Henry

ASPLENIUM ACROSTICHOIDES-SILVER SPLEENWORT A medium height fern with fronds 3-5 inches wide. Prefers well-drained, moist soil. Increases readily by division. **\$25.00 per 100**

ASPLENIUM ANGUSTIFOLIUM-NARROW SPLEENWORT A handsome fern similar to Christmas Fern but growing taller. Prefers moist, shady spots in woodland or border. Increases by divisions. **\$26.00 per 100**

OSMUNDA CINNAMOMEA-CINNAMON FERN Similar to Osmunda Claytoniana except it has a cinnamon-colored seed stalk and prefers moist, shady situations. **\$25.00 per 100**

POLYSTICHUM ACROSTICHOIDES-CHRISTMAS OR DAGGER FERN An evergreen fern of medium height similar to the Boston Fern. One of the hardiest, excellent for planting among shrubs of foundation plantings. Will stand open sun. Excellent for woodland. **\$20.00 per 100**

Wet Open Ground

ONOCLEA SENSIBILIS-SENSITIVE FERN A low growing fern useful as a foliage plant in open, wet spots, where even grass will not grow. **\$20.00 per 100**

OSMUNDA REGALIS-ROYAL FERN A hardy fern, somewhat similar to Maidenhair. Grows profusely in wet peat bogs or marshy swamps. **\$25.00 per 100**

Dry Rocky Ledges

ASPLENIUM PLATYNEURON-EBONY SPLEENWORT A handsome little evergreen having narrow fronds up to 12 inches high. A few specimens on a shady ledge with some moisture are outstanding. **\$20.00 per 100**

ASPLENIUM TRICHOMANES-MAIDENHAIR SPLEENWORT A very dainty little fern to grow in a moist shady crevasse in a ledge or wall. Evergreen, very good for bowl gardens. **\$20.00 per 100**

CAMPTOSORUS RHIZOPHYLLUS-WALKING-LEAF FERN This curious little evergreen fern increases by burying a leaf tip and rooting, thus forming a new plant as well as propagating by seed. Requires a shaded margin of rock with leaf mold and some moisture. Excellent for bowl gardens. **\$20.00 per 100**

CYSTOPTERIS BULBIFERA-BLADDER FERN A medium height fern having narrow lacy fronds. Requires a moist nook in rocks or ledges. Increases if conditions are ideal. **\$20.00 per 100**

CYSTOPTERIS FRAGILIS-FRAGILE BLADDER FERN Similar to the above except that it is lower growing and has more delicate fronds. Grows in drier situations and useful in rock gardens. **\$25.00 per 100**

POLYPODIUM VULGARE-COMMON POLYPODY An evergreen growing 6-9 inches high in clumps or carpets covering limestone boulders and ledges. Requires partial shade.
\$20.00 per 100

WOODSIA ILVENSIS-RUSTY WOODSIA A low growing fern forming large tufts on sunny rocks. A woolly, light green, turning rusty red in the Autumn.
\$25.00 per 100

WOODSIA OBTUSA-OBTUSE-LEAVED WOODSIA A taller growing form, liking full sun on rocky ledges. A good rock garden plant, naturalizing readily.
\$25.00 per 100

NATIVE ORCHIDS

Native orchids grow best in a shady or semi-shady, cool and somewhat moist situation. Set them just below the surface of the ground, as you would a peony root, making sure that the crowns will at no time be covered with water.

CYPRIPEDIUM ACAULE (The Moccasin Flower) The large slipper is bright rose, with darker veins and the spike rises from the center of two broad green leaves. It is a beautiful plant but not quite so adaptable as are *C. Reginae* and *C. pubescens*.
\$35.00 per 100 flowering buds

CYPRIPEDIUM PARVIFLORUM (The Small Yellow Ladyslipper) A fragrant flower with brilliant yellow hood and brown "ribbons." It is easy to grow in any shady situation.
\$35.00 per 100 flowering buds

CYPRIPEDIUM PUBESCENS (The Large Yellow Ladyslipper) The blooms are considerably larger than the above though the color is not quite so brilliant. A handsome plant and one of the most readily established.
\$35.00 per 100 flowering buds

CYPRIPEDIUM REGINAE Also known as *C. spectabile* and *C. hirsutum*. (**The Showy Ladyslipper**). This is the finest of our native Ladyslippers and the easiest to grow. The blooms are large, with a pink slipper backed by great white wings. The average height is 15 to 18 inches but plants may reach 2 to 3 feet in some locations.
\$35.00 per 100 flowering buds

HABENARIA BLEPHARIGLOTTIS (The White Fringed Orchid) The small flowers are white, with a fringed lip and arranged on a long spike. In contrast to the Ladyslipper family the Fringed Orchids flower in late July and August.
\$45.00 per 100 flowering buds

HABENARIA FIMBRIATA (The Large Purple-fringed Orchid) The flowers are lilac with a fringed lip and fragrant. July and August.
\$45.00 per 100 flowering buds

TRILLIUM

TRILLIUM GRANDIFLORUM We list only this one which is by far the most attractive of the Trilliums. The plant grows to 12 or 15 inches and the large white blooms change to rosy lilac as they mature.
\$20.00 per 100 \$150.00 per 1000

GARDEN MATERIALS HELPFUL IN GROWING LILIES

HORMODIN POWDER NO. 1

At Sandyloam we find Hormodin No. 1 most helpful in establishing all lilies and we especially recommend that bulbs of any rare, expensive or slightly difficult lily be dusted before they are planted. The old roots should be clipped before dusting and new roots will establish quickly.

$\frac{1}{4}$ oz. package, each 25c.

$1\frac{3}{4}$ oz. package, each 50c.

SPERGON

A number of disinfectants are in use for the prevention of both basal rot and damping off. We find Spergon a shade better than most and also the handiest to use. It is a fine yellow powder with which bulbs susceptible to basal rot should be dusted before planting.

2 oz. bottle, 45c.

PENETROL

A new compound that acts as both spreader and sticker when mixed with Bordeaux. It causes the spray to adhere for weeks even through wet weather. It can also be used with nicotine solutions for the control of aphids. Used at the rate of one pint to fifty gallons of water, or one teaspoon to two quarts of water. Full directions on bottle.

1 qt. bottle, 75c.

1 gal. bottle, \$1.75.



UPRIGHT LILY



MARTAGON LILY



TRUMPET LILY

TYPES OF LILY BLOOMS



L. Szovitsianum



L. umbellatum

1948

ORDER SHEET

Sandyloam

Spoonerville Road, North Springfield, Vermont

Ship by Date ordered 19....
State if wanted by parcel post or express.

In terms of our own transportation facilities we prefer shipping all small packages by parcel post.

To (Name)
Mr., Mrs., Miss or Firm Name.
P. O. Box, Street

or Rural Delivery

Post Office

State

Station or Exp. Office
Only if different from P. O.

Any claims for shortages or errors must be made within five days after receipt of goods as we will not be responsible after that time. We give no warranty, expressed or implied, as to description, quality, productiveness or any other matter in connection with the success of the seeds, bulbs or plants sold by us and will not be responsible in any way in cases of failure, other than to replace bulbs untrue to name. All orders are accepted on these conditions only.

IMPORTANT—Be sure to list remittance here

Enclosed Please Find	Draft or check	Money Order	Cash	Postage Stamps	Total Amount
Quantity	DESCRIPTION				Price
	TOTAL				

For Remarks or Additonal Space Use Other Side

1948

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Sandyloam

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Quantity	DESCRIPTION	Price
TOTAL		

For Remarks or Additonal Space Use Other Side

NORTH AMERICAN LILY SOCIETY

Membership in the Lily Society is open to any person, who is interested in promoting the culture of lilies. Provision is made for the organization of regional groups within the Society and for the affiliation of garden clubs and other societies interested in lily culture.

Dues in the Society are \$3.00 for annual membership, \$5.00 or more for sustaining membership and \$50.00 for life membership. Inquiries regarding the Society should be sent to the Secretary, Dr. Norma E. Pfeiffer, Boyce Thompson Institute, Yonkers, N. Y.

THE AMERICAN LILY YEARBOOK will be sent to all members of the Society. Price for non-members is \$3.00. The YEARBOOK can be ordered through SANDYLOAM.

